

REMARKSInterview request

Applicants respectfully request a telephonic interview after the Examiner has reviewed the instant RCE response and amendment. Applicants request the Examiner call Applicants' representative at 858 720 5133.

Status of the Claims*Pending claims*

Claims 1, 2, 4 to 9, 14 to 16, 18 to 20, 22 to 32 and 34 to 59 are pending.

Amendment not entered

The amendment submitted in Applicants' last "after final" response of February 28, 2007, was not entered (see paragraph 7, of the AA). Accordingly, the instant amendment to the claims is based on the claims as pending for the Final OA of November 29, 2006, from Applicants' amendment of June 26, 2006.

Please note Applicants have not repeated the amendment to the specification regarding the drawings, as it was inadvertently indicated that a color drawing was submitted. In fact, as explained below, no color drawings have been submitted, but rather only a color exhibit submitted in response to an office action (see Applicants response of October 13, 2005).

Claims canceled and added in the instant amendment

Claims 28, 30 and 34, claims 40 to 43, and 56 to 59, are canceled without prejudice or disclaimer; and new claims 60 to 74, are added. Thus, after entry of the instant amendment claims 1, 2, 4 to 9, 14 to 16, 18 to 20, 22 to 27, 29, 31, 32, 35 to 39, 44 to 55, and 60 to 74, will be pending and under consideration.

Outstanding Rejections

Claims 1, 2, 4 to 9, 14 to 16, 18 to 20, 22 to 32 and 34 to 59 under 35 U.S.C. §112, first paragraph, for allegedly containing "new matter". Claims 1, 2, 4 to 9, 14 to 16, 18 to 20, 22 to 32 and 34 to 59, are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement of 35 U.S.C. §112, first paragraph. Claims 27 to 30 and 56 to 59, are

rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement of section 112, first paragraph.

Applicants respectfully traverse all outstanding objections to the specification and rejection of the claims.

Support for the claim amendments

The specification sets forth an extensive description of the invention in the new and amended claims. For example, support for claims drawn to enzymatically active fragments of enzymes of the invention can be found, inter alia, in the second paragraph of page 3, of WO 97/44361 (the publication of PCT/US97/08793). Accordingly, no new matter has been added by the instant amendments.

Applicants respectfully request entry of the amendments set forth in this response under 37 CFR §1.116. The amendment places the case in condition for allowance and places the case in better condition for appeal; the amendment does not raise any issues of new matter; and, the amended claims do not present new issues requiring further consideration or search.

Advisory Action of March 14, 2007

Applicants' thank the Examiner for the helpful comments in his Advisory Action of March 14, 2007. In the AA, the Office noted that although the amendment from Applicants' last response of February 28, 2007, was not entered (for raising new issues), the arguments were considered, and new rejections were made (see page 2 of the AA).

Applicants endeavor to address these new rejections (in addition to the maintained rejections) in this RCE amendment.

Notice of Non-Compliant Amendment - drawings

The Office issued a Notice of Non-Compliant Amendment under 37 C.F.R. 1.121, dated March 06, 2007, regarding "amendment to drawings" to the specification; see paragraph 3 of that communication.

Applicants note that a color attachment was filed with Applicants' response of October 13, 2005. However, at no time has a color drawing to the specification been submitted.

However, in their last response of February 28, 2007, Applicants mistakenly submitted a petition to accept a color drawing for the file history under 37 CFR 1.84(a)(2) (with the requisite fee under 37 CFR 1.17(h)). Applicants respectfully note that because the “color attachment” was only an exhibit for a response and was not a specification drawing no petition is required.

Issues under 35 U.S.C. §112, first paragraph, new matter

Claims 1, 2, 4 to 9, 14 to 16, 18 to 20, 22 to 32 and 34 to 59 under 35 U.S.C. §112, first paragraph, for allegedly containing “new matter”. In particular, the Office alleged there is no support in the specification for the term “synthetic” with respect to the claimed nucleic acids or polypeptides of this invention (please see page 3 of the Final OA).

Applicants respectfully submit that the specification enables and describes embodiments comprising synthetic polynucleotides and polypeptides; please see Applicants last amendment and response of February 28, 2007 (in particular, pages 13 to 14 of that response), which is expressly incorporated herein.

Issues under 35 U.S.C. §112, first paragraph, enablement requirement

Claims 1, 2, 4 to 9, 14 to 16, 18 to 20, 22 to 32 and 34 to 59, are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement of section 112, first paragraph (please see pages 3 to 9 of the Final OA).

The Office did state that the specification does enable an endoglucanase having the amino acid sequence of SEQ ID NO:46, or at least 95% sequence identity to SEQ ID NO:46 and having endoglucanase activity (see lines 2 to 4, of the second paragraph, of page 3, of the Final OA). Accordingly, please see: amended claim 1, and claims 49 to 52 and 55, now drawn to polypeptides having endoglucanase or cellulase activity having an amino acid sequence having at least 95% sequence identity to the amino acid sequence of SEQ ID NO:46, or encoded by nucleic acids having at least 95% sequence identity to the polynucleotide sequence of SEQ ID NO:45, and compositions comprising these enzymes; claims 2 and 4, drawn to nucleic acids encoding these polypeptides; claims 5 to 7, drawn to vectors comprising these nucleic acids; claims 8 and 9, drawn to host cells comprising these nucleic acids or vectors; claim 14 and 45 to 48, drawn to methods for using these nucleic acids and enzymes; claim 18, drawn to a polypeptides having endoglucanase activity,

wherein the sequence identity is at least 97%; claim 20, wherein the nucleic acid has the polynucleotide sequence of SEQ ID NO:45; claim 22, wherein the polypeptide has at least 97% sequence identity to the amino acid sequence of SEQ ID NO:46; claim 24, wherein the polypeptide has endoglucanase activity; claim 25, wherein the polypeptide has cellulase activity; claim 26, wherein the cellulase activity comprises a carboxymethyl cellulase activity; claim 44, drawn to methods for converting plant biomass into fuels and chemicals using enzymes of amended claim 1.

However, the Office alleged that the specification does not reasonably enable any of the several claimed genera of polypeptides or polynucleotides having at least 90% sequence identity to an exemplary sequence of the invention (SEQ ID NO:45/46), or the claimed subsequences thereof, e.g., polypeptides at least 30 or 50 amino acid residues.

Applicants respectfully maintain that the specification enabled the skilled artisan at the time of the invention to identify, and make and use, any of the several claimed genus of polypeptides or polynucleotides having at least 90% sequence identity to SEQ ID NO:45/46, and to active fragments thereof – and in support have provided argument, evidence and expert declaration in previous responses, all of which are expressly incorporated herein; in particular, please see, e.g., pages 12 to 17, of the June 26, 2006, response; pages 10 to 16, of the October 13, 2005, response; and pages 14 to 16, of the February 28, 2007, response.

Because the specification provided direction and guidance on how to practice the claimed invention and all of the methods needed to practice the invention were well known, and because there was a high level of skill in the art at the time the application was filed, the instant specification did provide reasonable enablement commensurate with the scope of the claimed invention. In light of these responses and the instant amendment, Applicants respectfully submit that the enablement rejection under section 112, first paragraph, can be properly withdrawn.

Issues under 35 U.S.C. §112, first paragraph, written description requirement

Claims 27 to 30 and 56 to 59, are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement of section 112, first paragraph.

Applicants respectfully maintain that the claimed invention is sufficiently described in the specification so that one of ordinary skill in the art would be able to ascertain the scope of the claims with reasonable clarity and recognize that Applicants' were in possession of the claimed

invention at the time of filing, and in previous responses, all of which are expressly incorporated herein; please see, e.g., pages 17 to 19, of the June 26, 2006, response; and pages 16 to 19, of their October 13, 2005, response; and page 16, of the February 28, 2007, response) have provided argument in support.

In light of this amendment and these responses, Applicants respectfully submit that the pending claims as amended meet the written description requirement under 35 U.S.C. §112, first paragraph.

CONCLUSION

In view of the foregoing amendment and remarks, Applicants respectfully aver that the Examiner can properly withdraw the rejection of the pending claims under 35 U.S.C. §112, first and second paragraphs. In view of the above, claims in this application after entry of the instant amendment are believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections of the claims and to pass this application to issue.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 564462000502. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

As noted above, Applicants have requested a telephone conference with the undersigned representative to expedite prosecution of this application. After the Examiner has reviewed the instant response and amendment, please telephone the undersigned at 858 720 5133.

Dated: April 11, 2007

Respectfully submitted,

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